



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,757	10/21/2003	Yasumasa Nishiyama	9281-4684	6005

7590 04/20/2006

Brinks Hofer Gilson & Lione
P.O. Box 10395
Chicago, IL 60610

EXAMINER

HOLLIDAY, JAIME MICHELE

ART UNIT	PAPER NUMBER
----------	--------------

2617

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/689,757	Applicant(s) NISHIYAMA, YASUMASA	
	Examiner Jaime M. Holliday	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-31 is/are allowed.
- 6) ☒ Claim(s) 1,5-8 and 10 is/are rejected.
- 7) ☒ Claim(s) 2-4 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on October 21, 2003 has been considered by the Examiner and made of record in the application file.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claim 6** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. **Claim 6** recites the limitation "the first and second switches" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1, 5, 7 and 10** are rejected under 35 U.S.C. 102(b) as being anticipated by **Barber (U.S. Patent # 6,230,031 B1)**.

Consider **claim 1**, Barber clearly shows and discloses a system for amplifying output transmitted power of a mobile battery powered radio transceiver which is multimode and operates both CDMA and AMPS, reading on the claimed "high-output multi-mode mobile communication transceiver comprising a multi-mode mobile communication transceiver used in common for a plurality of communication modes including at least an AMPS mode," (abstract, fig. 2, col. 4 lines 23-25).

The radio transceiver **30** locks into a holder **32** which passes signals between the radio receiver and a booster amplifier **40**, reading on the claimed "a booster connectable with said multi-mode mobile communication transceiver," (fig. 1, col. 3 lines 51-61).

The radio transceiver includes a radio frequency transmit/receive circuit in which received radio signals are filtered, mixed to lower frequencies, automatic gain controlled and I and Q demodulated, reading on the claimed "multi-mode mobile communication transceiver comprising: a transmission circuit configured

to output at least transmission signals of the AMPS mode; and a reception circuit configured to receive at least reception signals of the AMPS mode,” (col. 4 lines 30-37).

The booster amplifier connects to an additional antenna **42**, which is in addition to an antenna that is in the radio transceiver. The connection between the radio transceiver, the holder, and the booster amplifier include, at least, signaling connections and a coaxial cable for passing RF signals to and from the radio transceiver, reading on the claimed “booster comprising a first terminal through which signals in the booster are connected with a first antenna; a power amplifier circuit connected with the first terminal; and a reception-signal sending circuit connected with the first terminal,” (col. 4 lines 1-6).

The radio transceiver includes a second voltage source, multiple power amplifiers, a central processing unit to control the amplification output of the transmitted signal, and a switch to detect the presence of the radio transceiver, reading on the claimed “booster is attached to said multi-mode mobile communication transceiver, the transmission circuit is connected in series with the power amplifier circuit, and the reception-signal sending circuit is connected in series with the reception circuit,” (abstract, fig. 1, fig. 2, fig. 4, fig. 5).

Consider **claim 5**, and **as applied to claim 1 above**, Barber further discloses that the main amplifying circuit consists of an input duplexer receiving from an input RF coaxial cable, two amplifying circuits **192** and **195**, and an output duplexer, outputting to an output RF coaxial cable. The two duplexers are

used to permit the simultaneous transmission and reception of two different RF signals at two different frequencies, for example, 800 megahertz and 1.9 gigahertz frequency signals, reading on the claimed "multi-mode mobile communication transceiver further comprises another transmission circuit configured to output transmission signals of at least a mode different from the AMPS mode and another reception circuit configured to receive reception signals of the mode different from the AMPS mode," (col. 8 lines 55-65).

Consider **claim 7**, and **as applied to claim 1 above**, Barber further discloses that the main amplifying circuit consists of an input duplexer receiving from an input RF coaxial cable, two amplifying circuits **192** and **195**, and an output duplexer, outputting to an output RF coaxial cable. The two duplexers are used to permit the simultaneous transmission and reception of two different RF signals at two different frequencies, for example, 800 megahertz and 1.9 gigahertz frequency signals, reading on the claimed "transmission circuit is configured to output transmission signals of at least a mode different from the AMPS mode and the reception circuit is configured to receive reception signals of the mode different from the AMPS mode," (col. 8 lines 55-65).

Consider **claim 10**, and **as applied to claim 1 above**, Barber further discloses that the CPU output signals which travel through the holder to the booster amplifier as indications of which mode the radio transceiver is transmitting and of which frequency band is in use. The booster amplifier then uses this information for selecting the appropriate frequency compliant circuitry

Art Unit: 2617

and the amount of linear amplification applied to the audio signal, reading on the claimed "baseband processing circuit configured to output control signals that change operation of the transmission circuit, the reception circuit, and a state of connection between both the transmission and reception circuits and the booster circuit," (col. 4 lines 52-65), wherein the CPU functions as a baseband processing circuit.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Barber** (U.S. Patent # 6,230,031 B1) in view of **Cornforth et al.** (U.S. Patent # 5,276,918).

Consider **claim 8**, and **as applied to claim 1 above**, Barber clearly shows and discloses the claimed invention, except that the radio transceiver and booster amplifier, reading on the claimed "multi-mode mobile communication transceiver and booster," are encased in a portable housing.

In the same field of endeavor, Cornforth et al. clearly show and disclose a mobile radio telephone incorporating a hand-portable unit and a booster unit, each effective to receive and transmit signals, means for intermediate frequency signals in the portable unit from signals received by the portable unit, the telephone being characterized in that it includes means for producing intermediate frequency signals in the booster unit from signals received by the booster unit, and means for enabling the portable unit to receive the intermediate frequency signals produced by the booster unit, reading on the claimed "the multi-mode mobile communication transceiver and the booster are encased in a portable housing," (col. 1 line 56- col. 2 line 4).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a booster and portable unit, reading on the claimed "multi-mode transceiver," in a mobile radio telephone as taught by Cornforth et al. in the system of Barber, in order to effectively amplify out transmitted power of a mobile battery powered radio transceiver (Barber, abstract).

Allowable Subject Matter

11. **Claims 11-31** are allowed.
12. **Claims 2-4 and 9** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaime M. Holliday whose telephone number is (571) 272-8618. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jaime Holliday



Patent Examiner

Marsha D Banks-Harold
MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600